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ABSTRACT

The criteria used by various groups in determining the destiny of an educational product are systematically explored. Educational products are defined as educational materials which are in a transportable, tangible, and packaged form; emphasis is placed on instructional, rather than informational materials. Three major types of decisions regarding educational products are addressed: product development, product screening, and product selection. Thirteen decision maker groups, ranging from product developers to state education agency personnel to students, are identified. Six clusters of product evaluation criteria are discussed: desirability, practicality, intrinsic quality, product development, user effects, and spinoffs. A framework for identifying criteria which are important to the various product decision-makers has been established as part of the effort to arrive at a consensus on minimum criteria. The desirability and feasibility of establishing common criteria for product evaluation are also discussed. (Author/MV)

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"TOWARD CONSENSUS ON MINIMUM CRITERIA FOR EDUCATIONAL PRODUCTS"

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"TOWARD CONSENSUS ON MINIMUM CRITERIA
FOR EDUCATIONAL PRODUCTS"

by
Dr. Susan S. Klein*

OVERVIEW

Recent estimates suggest that there are over ½ million different education products[1] available in the US today. (Komoski, 1976) Have you ever thought about the type of decisions that are made about any one of these products during its lifetime and about who might make these decision? This paper is intended to speculate on answers to this question. By doing so it is hoped that greater knowledge will be gained about product decision-making which, in turn, will help determine if and how agreement can be reached on establishing some minimum criteria of product quality for product decision-making. It is believed that greater consensus on minimum criteria will help consumers acquire more appropriate, higher quality educational products and thus improve American education!

At the present time we have limited organized knowledge about what criteria are used, by what decision makers and with what types of educational products. Preliminary findings suggest that educational product decision-making is more complex than one would suspect. Decisions about any one product may be made by many different groups for several different purposes.

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1 Products, for the purpose of this paper may be defined as materials which are in a transportable, tangible and packaged form. Examples include curriculum materials, computer programs, staff training materials, guides, models, documented administrative procedures, Project Information Packages (PIPs) -- which are packaged programs--and Learner Activity Packages, (LAPs)---which are packaged teaching practices. "Nonproducts" include; practices methods, programs procedures or techniques which have not been described in sufficient detail to enable replication without assistance from the orginators or their representatives. In this paper attention is given to instructional rather than other informational products such as research reports or library books.

The end result is that the product consumers or users rarely know if the product has been reviewed or, if it was, by whom. The consumers certainly have no knowledge of the criteria which were applied by the developers to initiate, revise or market a product or by the reviewers, who were to serve as consumer protectors. In an attempt to systematially explore what criteria are used by various groups who play a role in determining a product's destiny, this paper addresses three major types of product decisions:

I. Product Development Decisions-- are those whereby product developers, publishers and financial sponsors play major roles in determining whether a particular product should be developed and if so, whether it should be evaluated, revised at some point in time and disseminated.

II. Product Screening Decisions-- after a product is developed, groups or individuals other than developers, publishers, and financial sponsors screen or review the product and/or information about the product to determine whether or not it is of sufficient quality to recommend to consumers.

III. Product Selection Decisions-- are those where individuals actually decide to purchase or use the product.

For purposes of simplicity, thirteen decision maker groups have been identified ranging from product developers to state education agency personnel to students. Also, for the sake of convenience, the criteria have been grouped into six convenient clusters: Desirability, Practicality, Intrinsic Quality, Product Development, User Effects, and Spinoffs. An analytic framework has been established in order to indentify those criteria which are important to the various product decision-maker groups in an effort to arrive at consensus on minimum criteria.

In order to become oriented to this conceptual framework and also to supply NIE with additional information you are asked to take the time to complete the attached product decision-makers' criteria chart. NIE needs to know what you consider to be important criteria for educational product development, screening and selection decisions. This chart establishes the above mentioned framework for use in discussing the three types of product decision representing thirteen decision-maker groups and the six criteria clusters.

Decisions and Decision Makers

As was stated previously, Product development decisions are generally made by the product developers, publishers, or financial sponsors of the development. These three groups, it will be recalled, play major roles in determining whether a product should be developed in the first place, evaluated, revised and placed on or removed from the market.

Product screening decisions, which are intended to influence the product or product information dissemination activities, are performed by many individuals represented by the following seven groups: (some of which are involved also in product development decisions) federal education agencies, state education agencies, intermediate service agencies, local education agencies, other organizations with relevant expertise, education personnel organizations and consumers organizations. These groups play a consumer protection as well as a dissemination role. They are needed since consumers cannot individually make decisions relating to the use of more than a few of the one half million available educational products. Product screening decisions generally result from reviews of multiple product alternatives. In reviews, as contrasted with evaluations, a limited amount of time is spent examining the products and/or information about the products.

(In an empirical evaluation specific data is collected and analysed.) Reviewers or screeners must rely on available information. The positive results of the screening decisions may be communicated by approved lists of products, catalogs product displays, or through informal oral channels. In many cases the screeners recommendations do not reach the individuals who select the products. Federal agencies often have mandates to improve education in certain problem areas and thus review products to determine those of high quality. The agency may provide financial support to aid in the dissemination of products which it identifies as high quality or, at the minimum, it may ensure that the information provided about the products clearly sets forth the materials strengths and weaknesses. State education agencies have legislative responsibility for education curricula and many have enacted legislation to protect their students and teachers from "low" quality products (regulatory responsibility) or at least to encourage them to select high quality state approved products. (dissemination responsibility) Sometimes states have legal requirements about adhering to certain criteria. Intermediate education service agencies are generally sponsored by federal programs (such as the Bureau of Education for the Handicapped, Area Learning Resource Centers), state department of education or local education agencies operating in a cooperative mode. (e.g., many local education agencies have formed media cooperatives to screen and share supplementary educational materials). Local education agencies may function like state or intermediate service agencies when they screen products. As at the Federal and State Education Agency level, there is much variation in the locals' use of product screening procedures and criteria. In some cases school boards "rubber stamp" reviews by curriculum committees. In other cases curriculum specialists make independent screening decisions, or recommendations to others

There is also a wide variety of education experts associated with organizations, such as higher education institutions and R&D organizations or professional associations, who play a role in screening educational products which others may use. Some groups such as NEA, AFT, AASA, ASCD, and the National Council on Social Studies, etc., with a major interest in product screening, represent the education practitioners. Other consumer organizations, such as the Educational Products Information Exchange Institute, (EPIE) are responsive to the needs of the education practitioner, product consumers, and lay groups concerned with education. Other consumers groups include citizens' groups, PTA, NOW, the Council on Interacial Books, etc. Product selection decisions are generally made by administrators (including librarians and non instructional personnel), teachers, and occasionally by students. Sometimes the purchasers of the products are not the actual users. Both consumers and users are grouped here together because they both participate in the selection of products. The products are chosen from among those which appear most appropriate for use with particular individuals for a specific purpose and in accordance with available resources. Types of products selected range from those needed to augment a library or resource center, to textbooks and supplementary instructional materials.

Certain individuals may make several kinds of products decisions. For example, federal, state, and local education agencies are often concerned with developing high quality products and also with helping the consumers identify and acquire only high quality, appropriate products whether sponsored by them or by others. Purchasers may function also as screeners. Teachers may be product producers and screeners.

Criteria Cluster

The six criteria clusters : 1. Desirability, 2. Practicality, 3. Intrinsic Quality, 4. Product Development, 5. User Effects and 6. Spinoffs are arbitrary groupings. These clusters could be expanded or contracted and many of the items in the clusters could be included under different cluster headings.

1. Items in the desirability cluster include need, appropriateness for intended users, adherance to local social, moral, and instructional values; and demand. The major distinguishing common characteristic is that the items are particularly idiosyncratic to the local product decision-maker. For example, an item such as the "scope of the content" may be viewed by one decision-maker as desirable and by another as unacceptable.
2. Items in the practicality cluster include those which bear upon the advantages and disadvantages of the product, such as compatability with the decision-makers' resources. These criteria are not as idosyncratic as the desirability criteria because many decision-makers would agree on common practicality virtues like reasonable cost, availability, and ease of use.
3. Intrinsic quality criteria are those which must be ascertained by examining the product itself rather than by simply reviewing information about the product. Standards have already been established for many of these items but experts may be needed to apply the standards. Items in this cluster include: sex, race, ethnicity age, and socio-economic fairness or balance; content accuracy and currency; instructional quality; technical quality; appeal; etc.
4. Product development criteria are generally secondary indicators which

suggest that if developed with care and proper procedures the product would certainly be adequate.

5. User Effects refer to documented results which have occured and which may occur again when the product is used as directed with a similar target group. For our purposes user effects are not just vague statements that something is supposed to happen. On the contrary, they indicate that there is evidence that something benefical or harmful has happened.

6. Spinoffs are by-products such as the development of unique models or research knowledge stemming from work on the product.

PRELIMINARY RESULTS

Criteria of importance to each decision-maker group have been obtained as a result of an analysis of prelimary data gathered from a review of some of the sparse literature in the field; by analyses of criteria lists; and from about 20 informal telephone interviews based upon the attached "Product Decision-Makers Criteria Chart."

I. Product Development Decisions

R&D Developers

A preliminary analysis of the product descriptions in the Catalog of NIE Education Products reveals that these NIE sponsored R&D developers made assurances or claims about the attributes of their products in all six criteria clusters. Under desirability they mentioned user demand for the product; under parcticality competitive price, and ease of use were cited frequently. Intrinsic quality attributes commonly mentioned were content accuracy and race and sex balance. Under product development careful design and development procedures were claimed. Related data suggest that two thirds of these NIE products underwent Learner

Verfications and Revision, (LVR). The developers made numerous claims of user effects and frequently mutiple types of user effects were claimed for the same product. An examination of a sample of 50 products where user effects were claimed, indicated that 78% stressed the positive effect of the product on the learner's ability to complete specified learning tasks to a mastery level; 64% stressed cognitive effects such as significant gains in the amount or rate, of learning. Generally these cognitive effects were measured by standardized achievement tests and/or criterion - referenced tests. Seventy-six percent of the sample claimed evidence of user satisfaction and 34% claimed motivational improvements. Developer anecdotes, interviews with users, and attitude studies were primary sources of this evidence. Occasionally the developers made negative claims. There were only occasional claims in the area of spinoffs. However, items on this and the other clusters are being examined in detail for over 600 NIE products.

Publishers

Based on very limited data which was probably biased to favor R&D type publishers, it appears that publishers think that all six criteria clusters are important. Under desirability the few publishers interviewed asked questions relating to demand such as: Are there enough buyers? Does the product complement other products offered by the firm which can be marketed at the same time? Does the product satisfy a need not being met by others? Is the consumer climate ripe for the product and are its values such that it will be acceptable to target users? Under practicality the publishers mentioned the need for product flexibility, competitive price, the ability of their organizations to service or aid the product consumers, and ease of using the product.

under intrinsic quality some publishers mentioned their sensitivity to sexism since they lost some major sales due to sexism in their materials. The product packaging and visual appeal to purchasers (teachers) were mentioned as being important to sales although not necessarily contributors to effectiveness. The publishers interviewed felt that careful product development was important to their firm, and that this would include user testing and appropriate revision. One publisher mentioned that it gives user warranties for performance and servicing of the firm's products. The publishers interviewed did not use criteria checklists, instead they hired experts who are supposed to apply these criteria to their development decisions on a daily basis.

Each publisher represented in the sample said that there should be user effects criteria for instructional products. Some felt that positive spinoffs may occur but that they are generally identified post hoc. For example, developers try to utilize past product ideas that work when developing new products.

Financial Sponsors of Development

In the last few years both NSF and NIE have conducted a few systematic reviews using criteria lists to help external reviewers advise them on the desirability of continued investments in the development and dissemination of some of the agency sponsored products. NIE reviewers have utilized all criteria clusters in this framework except spinoffs and have especially consider evidence of effectiveness and the credibility of that evidence. In its most recent review of some of its sponsored curricula, NSF did not include the criteria for demonstrated user effectiveness with a specified group. Instead NSF asked their reviewers if the producer's proposed or anticipated outcomes were desirable. Under this desirability cluster NSF also seemed concerned with the reviewers' personal feelings about the value of the products.

Both NSF and NIE stressed the importance of comparing their own sponsord products with other products which may have been sponsored by other sources. A foundation sponsor of product developers emphasized the importance of identifying highly qualified developers in the subject area and a large publishing company which would make the completed product known and available to consumers.

II Product Screening or Consumer Protection Dissemination Decisions

Federal Agencies

Federal agencies concerned with education may conduct reviews using their own staff, may supervise external reviewers, or may fund contracts designed to identify and screen education products preliminary to final product selection action. In the inhouse review category, the OE/NIE Joint Dissemination Review Panel reviews only for product and program effectiveness although it is requesting that the agencies do preliminary screening on criteria related to the freedom from sex, race, ethnic, social, economic, and age bias and reasonableness of price. Due to recent Congressional pressure, NSF has "tightened up" its curriculum review process. A recent report (Schermer, 1975) reviewed twelve federally funded product screening activities. Most of these reviews utilized criteria in the desirability, practicality, intrinsic quality, and user effects clusters. However, it should be noted that screening activities for only a couple, revealed use of criteria relating to freedom from sex, race, or other biases. Most federal reviews have examined actual user effects and found little information indicating use of this criteria. The federal product screening criteria related to desirability are usually quite general. Product development criteria are mentioned infrequently, and spinoffs were not mentioned.

State Education Agencies

According to a recent survey (EPIE, 1976 draft) there are over 20 states which have state instructional materials adoption legislation or regulations. This "adoption territory" covers over 40% of the student population in the U.S. Additional states also provide guidance to educators on product selection. From this preliminary EPIE review of state screening criteria, it appears that states are quite concerned with the desirability, practicability and intrinsic quality criteria clusters. A few are concerned with product development criteria such as Learner Verification and Revision, (LVR). There has been practically no state inclusion of positive learner effects criteria in any of the checklists reviewed to date; however, some states have used effectiveness criteria in identifying validating, and disseminating programs.

In the desirability criteria cluster, several states seem uniquely concerned with whether or not a product reflects American ideals, freedom from partisanism or sectarianism, appropriate morals. and absence of inappropriate violence and profanity. One state criteria list specifies that evolution should be identified as theory and not fact.

In the practicability cluster, the states are concerned with amount of teacher training required, teacher and student aids, adaptability, presence or absence of an evaluation component, and price. In the intrinsic quality cluster many states appear to have increased their attention to social fairness factors from 1969 to 1975. States are also concerned with currency and accuracy of the information in the product and the adequacy of the product's physical features such as economic and durable construction. Currently two states have LVR legislation which would suggest their concern with the adequacy of

of product development; other states use LVR as a part of their general screening criteria. The only state criteria statement found in this survey relating to user effects was concerned with avoiding negative user effects so violent that they would detract from the product's value.

Intermediate Service Agencies or ISA Groups

Based on the little we know about intermediate service agencies or groups it appears that their main product dissemination functions have been to display state-approved and other products and sometimes to circulate mainly media products or information on the products to the consumers, for their review or use. These intermediate groups often use screening criteria to determine what they should purchase for their collections and sometimes they collect user data. The desirability, practicality and intrinsic quality criteria clusters seem most important to the intermediate groups we have examined. Under intrinsic quality many mentioned authenticity and technical quality and aesthetic value. However, there was no mention of screening for sex, race or ethnic fairness. Since most of the experience of these intermediate screening groups was with media materials which are less likely to have easily measurable instructional effects than textbooks, it was interesting to note the ISA groups' common use of user effects criteria. Several ISA respondents did say that this effectiveness information should be summarized in a way that teachers could understand it. There was little mention of screening products for the adequacy of their development although one ISA representative made some points about considering the credibility and honesty of the producer and the producer's ability to share information on other users' positive and negative experiences.

Local Education Agencies

that school districts are less likely to have written criteria or consistent review procedures than states. For example, one school district official said that their district considers changing products frequently but seldom goes about this change the same way twice. There is also a wide variety of ways that school boards and teacher review groups participate in the product screening process. One small study (Schaffarizick, 1975) indicated that in 35% of the cases the local education agency reviewers only saw the actual product or a sample, 4% reviewed only product costs, and at least 58% had no evidence on the need for the product and its effects.

Under the desirability criteria cluster, in addition to values such as loyalty and Americanism, one of the ten district criteria lists reviewed (EPIE, 1976 draft) mentioned"helping children find joy in reading."

In the intrinsic quality cluster many districts appear to have increased their attention to social fairness factors from 1969 to 1975, but not all of those which included racial or ethnic fairness criteria in 1975, also included freedom from sex bias.

Typically school districts do not pay much attention to criteria related to product development but those that have, mentioned the need for authors to have teaching experience and adequate scholarship. New York City has a pilot LVR screening activity for non-book media. In the EPIE survey of 10 districts there was limited attention to user effects . At the most, one district in the group was interested in having the teachers rate some student reactions relating to motivation and inquiry. A school district not in the EPIE survey asked if the material achieved its stated purpose. Where written criteria

and procedural guides exist, school districts may have different criteria guidelines for the review of library book , media and textbooks.

Expert Organizations

Frequently individuals from higher education institutions, testing or other R&D organizations or discipline oriented associations are asked to serve on product review teams or to conduct independent product reviews. These individual specialists are generally selected for their expertise in the subject area, in instructional techonology, or in evaluation. In some cases, these expert organizations have been requested to conduct the review of alternative products for another group such as a Federal education agency and some prepare lists of exemplary products for their constituents. The few individuals interviewed from those organizations, generally felt that items in all six criteria clusters were important but, also mentioned some new criteria items. These included in the desirability cluster, the degree to which the material related to other curriculum materials. For example, it would be desirable to have familiar story characters in an elementary reader. Under practicality, a reviewer mentioned the idea that products should be scapable and that cost is important but may be misleading. In the intrinsic quality cluster one expert felt that the instructional objectives should be spelled out or easily inferred. The experts queried also felt that in the user effects cluster, the impact of the product was important, and one mentioned that this was somewhat dependent on a good distribution system.

Organizations For Education Personnel

Organizations for education personnel differ in the extent of their interest and involvement in reviewing products or in advising their members on product review criteria. With the exception of the American Association of School Administrators, (AASA) whose task forces have developed criteria guidelines in areas like sex fairness, the groups representing administrators have recently been concerned with establishing systematic review procedures to handle citizen complaints. The central staff members interviewed from two major teacher groups, the National Education Association (NEA) and the American Federation of Teachers, (AFT) differed in their views on product review. The AFT respondent said criteria for screening products were not important because "a creative teacher can use anything." The NEA respondent said that NEA would want to apply the same criteria that teachers use and cited under "desirability" the importance of appropriateness to instructional, organizational and student needs, and nondiscriminatory qualities under the intrinsic quality cluster. The NEA respondent stated that LVR and teacher involvement in the products' development would be key product development criteria.

Organization such as the Association for Supervision and Curriculum Development (ASCD) and the National Council of Teachers of English (NCTE) publish guides to selecting instructional materials. The ASCD guide "Selecting New Aids to Teaching" (Miller, 1971), addressed items in all our criteria clusters except product development and spinoffs. In the area of practicality this guide highlighted the importance of qualities relating to organizational requirements and product maintenance characteristics. For user effects they were concerned that adequate research support the claims and with comparative effects.

Organizations Of and For Consumers

EPIE is the only comprehensive consumer group concerned with product screening. Its primary members include education practitioners especially in LEAs and lay groups. EPIE has a very sophisticated analyst and user review system and the most comprehensive list of criteria of any product decision-maker group we have examined. In recent years EPIE has highlighted the need for consumers and producers to examine products with respect to the congruence of the instructional design, an intrinsic quality dimension and LVR to assure adequate product development and revisions.

EPIE worked with a lay group, the National Committee for Citizens in Education, to develop product review criteria for parents and other concerned citizens ("Fits and Misfits," 1974). These criteria are less comprehensive than regular EPIE criteria. In the user effects area, the items stress the importance of local pilot testing and use. There are also many special interest groups such as the National Organization of Women (NOW) and the Council on Interracial Books which review products only on criteria related to their missions, in this case sex and race bias. The Schaifarzick study pointed out that, in general, local lay groups have little influence on many routine product selection decisions. As members of official groups such as the school board, the lay public generally either rubber stamp previous reviewers' recommendations or else become involved in controversial areas such as sex education where they frequently plan a conservative or disapproving role. Many school districts are making sure that their screening procedures, allow for community involvement and that they have adequate grievance and review mechanisms to avoid serious textbook controversies such as the 1974 Kanawha Co., West Virginia dispute.

II Product Selecting by the Consumer/User

Administrator/Librarian/Curriculum Specialist

Administrators, librarians, media and curriculum specialists commonly purchase the materials for the users. As purchasers they are often especially concerned with making sure that those who actually select the products do so using appropriate procedures which require involvement of teachers, other specialists and occasionally students and parents on selection committees. Actual user try-outs and evaluation are accomplished where possible. The higher the administrators are in their school system, the less likely they are actually to be involved in making specific product selection decisions. However, they may veto the recommendations of selectors if they are short of funds or if they feel that the decisions were not responsive to community concerns or were otherwise poor decisions. Criteria of particular concern to the mid-level administrator, including librarian, media specialist and curriculum specialist, are practicality criteria such as the availability of training in the use of the material; intrinsic qualities such as durability, attractiveness, social fairness; and occasionally user effects criteria such as student reading improvement scores. At times the purchasers/selectors do not have adequate time and resources to identify and review purchase options and may take the expedient route of ordering from a convenient publisher's catalog at the end of a budget year. It is also generally believed that higher-level school administrators such as principals make final decisions about the more complex and expensive programs and products such as Individually Guided Education,(IGE) while teachers make decisions about supplementary materials such as a science filmstrip.

Teacher

In the US and even in other countries such as France teachers are playing a more active role in product selection. In some cases publishers sell their products directly to the teachers who purchase them with school or their own personal funds. In other cases teachers may select from a wide range of prescreened product alternatives which are on approved purchase lists or which, especially in the case of supplementary materials, are available on a loan basis from the school district or an intermediate group. In order to understand how teachers make selection decisions it is helpful to attempt to answer the following questions.

o What do teachers actually see when they select a product?

In most cases teachers see a brief publisher's catalog or flyer type description. If they are lucky they see the product or a sample part of the product. If the product is a filmstrip, they may preview it; if a textbook, they may also see some publisher's-supplied descriptive material such as a "scope and a sequence" chart. Teachers rarely see evaluative or analytical information on the products and generally must also do their own analyses of the substantive differences as well as the qualitative differences among the altenatives. If the product has been used in their school and the teachers are aware of such use they may be able to obtain some views and opinions from their colleagues.

o How much time do teachers spend selecting products?

Preliminary results of an ongoing survey by EPIE (Komoski, Jan. 1976) suggest that: "Teachers base about 95% of their teaching time on the use of some type of instructional materials" and "they spend only from three to ten hours per year selecting

instructional materials, and a still smaller amount of time analyzing the instructional strengths and weaknesses of the materials prior to selecting them or putting them in the classrooms."

- How do teachers select products?

Teachers frequently select products that they and others will use when serving as members of product selection committees. Teachers are most likely to make selection decisions individually if the product is to be used primarly in their classroom and if they are renting or borrowing rather than purchasing a product. It has become apparent in some recent product selection activities that teachers need help in judging products on many criteria. For example, teachers have trouble determining the validity of the content of teacher training products or the credibility of the evidence which may be presented to support publisher claims of effectiveness. (Klein and McClure, 1975)

- Do teachers want to select products which have been screened?

The few teachers we asked, and other educators speaking for teachers, said that teachers did want to have the ½ million education products screened by others so that they could select from among the "best of the lot". However, it is likely that teachers who do select from among the prescreened alternatives are not likely to know by whom the products were screened and on what bases the screened products were included or excluded from the "approved" lists.

There have been some small scale studies (Klein and McClure, 1975; Latham, 1973; Levine, 1974; McClure, 1976; and Sprigle, 1973) of teachers' use of product selection criteria. Some of these studies focused on the selection of teacher training materials or instructional materials for handicapped students. Despite the differences in types of products considered for selection

teachers generally appear to be concerned with the following criteria:

- Desirability All teachers interviewed mentioned the importance of desirability criteria such as appropriateness for student's age, acquired skill and vocabulary level and congruence with teacher values, instructional purposes, and teaching styles. Typical teacher product selection questions relating to teaching style asked if the product could be used for individual as well as for group instruction, if it facilitated special types of student teacher interaction, and if it contained diagnostic materials.
- Practicality The teachers wanted a product to be easy for them and for the students to use. For example, they often asked if the product included a teachers' manual, user assessment materials, follow-up suggestions for student activities, minimal teacher preparation time, and if the students could use the material without teacher assistance. Teachers are also concerned with the degree of availability of the products and of the needed replacement parts, and with storage requirements and portability. In addition, they are concerned with price, the reusability of the product, and whether or not it is usable by more than one instructor. Furthermore teachers want to know if they need to be trained to use the product and if flexibility of use is built into the product.
- Intrinsic Qualities of prime interest to teachers include: factual accuracy, currency, durability, attractiveness, clarity, readability and use of practical, realistic examples, and good illustrations , and instructional qualities (such as appropriate sequencing of tasks, use of instructional objectives, allowance for appropriate practice and learner reinforcement). Despite the

current interest in race, ethnic and sex fairness criteria it was quite surprising how few of the studies of teachers' use of selection criteria even mentioned these or any other criteria related to social fairness. For example, recently fourteen teachers (male and female, black and white) were asked to brain-storm on what criteria they thought would be important in selecting instructional products. Although these teachers mentioned items from all five of the major criteria clusters, they did not mention the need for examining products to determine if they were free of sexism, racism, etc.

- Product Development

In general the studies indicated that teachers are not particularly concerned with "product development" criteria. In the few cases where teachers mentioned these criteria they want to know if the authors were qualified, if the product was published by publishers which they favor or if the product had been field tested.

- User Effects

Teachers also want to know how the product affected the users. In the user effects criteria cluster, teachers asked questions about the ability of the product to hold learner interest over a period of time, the ability of the students to comprehend the content, and the product's "track record," including length of time required for the student to achieve the stated objectives. Teachers also asked about indicators of prior success, and whether the material was safe or not harmful to the users.

- Spinoffs

Under the spinoff criteria cluster one teacher mentioned that when she previewed materials she often obtained instructional ideas that she could replicate with her existing resources.

Students

At the present time students appear to have little direct influence over the selection of the instructional materials that they use. For example, it is well known that publishers design and market their products in a way which is intended to appeal to the administrator or teacher purchasers rather than to the student. (Brody, 1975) At the most, older students may be represented in instructional materials selection committees. Otherwise, students' opportunities to select materials have generally been limited to their choices of library books and individual learning resources. Some teachers try to select materials from a student viewpoint, but it is unlikely that they fully comprehend that viewpoint. In a recent pilot study, a 5th and 6th grade teacher attempted to guess which criteria items her students would think important. The next day she asked the students that question. As she surmised, the students thought that items in the desirability, practicality and intrinsic quality criteria clusters were important. However, when the specific items within these clusters were examined some interesting discrepancies emerge The teacher thought that under desirability the students would want a clearly stated purpose. The students did not mention this, but did, as the teacher predicted, and express a desire for varied, concise interesting material. Under practicality, the students stressed organization for ease of use including indexes, tables of contents, and meaningful headings. Under intrinsic quality the students expressed interest in the quality, depth, and accuracy of information. They also wanted the products to be durable, to have illustrations and interesting end-of-lesson activities to help them

retain what they had learned. The teacher thought that the students would include freedom from race or sex bias in their criteria but they did not. She did say that when students worked with actual materials they identified instances of bias. As the teacher expected, the students did not care about product development or user effects criteria, both of which they probably didn't think about at all.

SUMMARY AND DISCUSSION OF WHO MAY BE USING WHAT CRITERIA

As seen in the attached "Summary Product Decision-Makers' Criteria Chart", preliminary findings indicate that all the product decision-maker groups consistently used criteria in the Desirability, Practicality and Intrinsic Quality clusters. Fewer groups felt that criteria associated with product development and user effects were essential and no groups indicated that spinoff attributes were essential.

- o Product Development Decisions

  Groups making decisions about product development, evaluation and marketing maintain that five of the six criteria clusters are essential and that the spinoffs criteria cluster is applied least often. One of the major issues faced by those involved in using criteria to make product development decisions is: How can these criteria be applied when products are in different stages of development? For example, one cannot expect to have user effects data at the time a new product is proposed except perhaps on some prototype unit of the proposed product.

- o Product Screening Decisions

  The consumer protection activities of the screening groups are poorly articulated, lacking, or overlapping. Federal agencies such as NIE, OE and NSF, State education agencies, intermediate service agencies, local education agencies and consumer organizations

CRITERIA CLUSTERS

PRODUCT DECISION MAKER ROLE(s)	Desirability	Practicality	Intrinsic Quality	Product Development	User Effects	Spinoffs
X=essential criteria O=desirable criteria -unimportant criteria	o need o appropriate for intended users o community acceptance--adherance to social, moral, & instructional values, etc. o demand	o adaptability o ease of use o reasonable fiscal & psychic costs, o availability & accessibility to users o ability to receive any needed training to use product	o sex, race, ethnic, age, socio-economic fairness or balance o content accuracy & currency o instructional quality, congruence of design, clarity, clear purpose o technical quality of physical features of materials o Attractiveness	o learner verification and revision o quality design and rationale o expert staff	o Types of effects--cognitive skill, performance, attitude, motivation learning rate, attendance, impact on others, harmfulness o credibility of evidence supporting claimed effects	o model for other work o contributes to knowledge
I. Product Development						
o developer	X	X	X	X	X	O
o publisher	X	X	X	X	X	O
o fiscal sponsor	X	X	X	X	X	O
II. Product Screening-Consumer Protector, Disseminator						
o federal agencies concerned with education	X	X	X	O	X	▬
o state education agency	X	X	X	O	▬	▬
o intermediate service agency	X	X	X	O	X	▬
o local education agency	X	X	X	O	O	▬
o expert organization - Higher Education, R&D & Evaluation, Testing organization, etc.	X	X	X	X	X	O
o organization for education personnel users - NEA, AFT, AASA, ASCD etc.	X	X	X	X	X	▬
o organization for or of consumers - including non-educational practitioners - EPIE, citizens groups PTA, NOW, Council on Interracial Books, etc.	X	X	X	X	X	▬
III. Product Selecting by the Consumer/User						
o administrator	X	X	X	O	O	▬
o teacher	X	X	X	O	X	O
o student	X	X	X	▬	▬	▬

may all review the same product for similar purposes and make different decisions. An examination of the "Summary Product Decision-Makers' Criteria Chart" helps explain this divergence. Different product screening groups use different criteria. Thus, a product may be approved by a state education agency based on adequacy on desirability, practicability, and intrinsic quality criteria, but judged as inadequate by other organizations which feel that the product is not sufficiently meritorious on product development and user effects criteria. It should be noted that even if all product screening groups used identical screening procedures, criteria and explict operational standards to judge the same product, different people may still arrive at different recommendations. However, this is a minor concern given the present chaos related to lack of consensus in using common review criteria and lack of procedures for the product screening groups to coordinate their work and to communicate their decisions to other screening, and product selection groups.

III. Product Selection Decisions

The consumers or users generally do not know who reviewed any product, much less what criteria were applied in making product screening decisions. If a product were screened but still found some path to the user(such as via direct publisher contact), the user might not know that the product was ever reviewed and why it was not approved. Even if the product were approved, that fact, the reasons for approval,and the criteria used, are unlikely to reach the consumer/user. The difficulties involved in product selection are compounded when a user must choose from some ½ million available education products, only some of which have been screened, and has extremely limited time in which to do so.

However, the problems become more complex when one tries to select products which will satisfy administrators, teachers and students as well. As the "Summary Product Decision Makers' Chart" suggests, these three groups, if selecting products for their own use may use different criteria. For example, stud ents if they had a say, might reject a product selected by teachers or administrators because it didn't have colored pictures or sufficient variety. Similarly, teachers might want to reject a product purchased by an administrator because it didn't have evidence of positive user effects, a criteria which teachers, even more than administrators and screeners in state and local education agencies, in this pilot survey, felt was important.

ASSUMING THE ACCURACY OF THIS IMAGE OF DISCONSENSUS, CAN WE ACHIEVE CONSENSUS ON MINIMUM CRITERIA FOR EDUCATIONAL PRODUCTS?

Yes	No
1. Is it desirable to try to establish minimum common criteria for educational products?	
o The appropriate selection of products is important because "teachers base about 95% of their total teaching time on the use of some type of instructional materials" (Komoski, 1976). This adds up to 47½ billion hours of school instruction per year and the materials alone cost over $900 million. (Komoski, 1976)	o Some think that education products are unimportant because a good teacher can teach with anything
o In the U.S. alone there are probably over ½ million instructional materials, most of which are supplemental media materials. However, it is even difficult for reviewers and users to cope with the estimated 19,000 primarily print based instructional programs. (Komoski, 1976)	o Others think there is little qualitative difference in the products designed to accomplish similar purposes and that attention should be given to the adequate implementation rather than the adequate selection of products.
o The current screening and selection procedures are generally <u>not</u> operating rationally, systematically, or efficiently for some of the following reasons: - Teachers and others have very limited time to spend in making product screening or selection decisions. They want to be informed of the "best" or "exemplary" alternatives. - Screeners and selectors rarely have credible summary information about the product which allows them to make a credible judgment about criteria which are not immediatly obvious from a quick examination of the product itself. If there were minimum common criteria,	o The screening and selection procedures are not likely to be helpful since they tend to operate in an unrealistic negative, restraining, censuring fashion for the following reasons: - Teachers and others will generally select what is most easily available or familiar. It is much easier to make reactive, expedient decisions based on sales or political pressures than to make proactive decisions based on analysis of user contraints and product attributes.

Yes	No
product decision makers would be in a better position to require and obtain this comparative summary information.	- There are insufficient resources to prepare objective summary information that would be responsive to product criteria. It is not to the advantage of the major group with resources, the producers, to prepare this information because they are unlikely to wish to comment on weaknesses of their products.
- In making judgments, screeners and selectors have almost no operational standards for each criteria item. They also have limited information on how other products fare on similar criteria. If common criteria were established it would be possible to develop these operational standards.	- It is impossible to compare products since each is different and each product use is unique.
- When screeners and selectors do use a systematic criteria checklist, the lists are often incomplete. For example, sex and racial fairness criteria are frequently inadvertently eliminated from these criteria lists. The use of common minimum criteria would identify the basic criteria list. Other criteria could be added on an optional basis.	- Comprehensive lists of criteria would be too tedious and unlikely to be used on a routine basis.
o Common criteria would make it more feasible for product producers to develop high quality products in desired instructional areas and to collect and present evidence about those desired product attributes. They would also waste less time preparing supporting statements in ten different ways.	o Producers may not be interested in achieving quality on all criteria dimensions or if minimum criteria are established there may be less incentive for publishers to strive for excellence
o At the moment, the screening groups are doing little to help the consumers locate a small group of appropriate alternatives from which to make their final selection decisions. Greater articulation among screeners including assigning specific criteria to each of those groups may help. (To do this a core set of common minmum criteria would be used after the product was reviewed by several groups, but no one group would be responsible for detailed examination of the product in relation to all the criteria).	o The selectors eventually need to make the final decision on the use of the product, thus it is wasteful and unnecessary to have others screening for them.

Yes

NO

2. Can Mimimum Common Criteria Be Established?

- Some think that checklists for minimum common criteria can be created for each criteria cluster and for some specific items such as sex fairness within each cluster. Most of those interviewed thought that this would be most feasible for "practicality," "intrinsic quality," "product development," and, "user effects" clusters.

- Others thought that checklists for minimum common criteria would need to be so general that they would be useless in discriminating among various product quality attributes.

- It is technically feasible to select some core criteria, develop operational definitions for these criteria and even standards for judging the criteria. Several comprehensive criteria lists have already been established and training materials and programs developed to help product decision makers apply them consistently.

- It is also possible that different minimum criteria will be needed for product, and program decisions and for decisions about various types of products such as texts or library resources.

- Although at the present time criteria are not used consistently among the product decision maker group this inconsistency may be attributed to accident rather than to real differences in the importance of various criteria for each group. Many of the current differences in criteria used by each group are apt to be semantic differences or differences in temporal focus rather than "truly" substantive differences of opinion. These differences are of such a minor nature that it would be possible to identify and adopt minimum common criteria.

- They also pointed out that there are many reasons for making product decisions and that criteria for the different development screening and selection purposes vary.

- Some think that it is important to involve each group in developing the criteria so that the criteria will be appropriate and so that the criteria will be used.

- Others point out that the articulation are division of responsibility among even the seven screening groups and the three selection groups will be difficult if not impossible due to the fractionation of education responsibilities in the U.S.

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